

Claims:

1. An electrochemical generator comprising:
 - an enclosure;
 - 5 - a stack of electrochemical cells positioned within said enclosure; and
 - an apparatus positioned within said enclosure for maintaining said stack of electrochemical cells in a state of compression, said apparatus including at least one spring plate
10 characterized by a series of resilient lateral extensions acting as springs.
2. An electrochemical generator as defined in claim 1,
15 wherein said spring plate comprises a main body from which extends said series of resilient lateral extensions.
3. An electrochemical generator as defined in claim 2,
20 wherein the resilient lateral extensions extend from both sides of said main body.
4. An electrochemical generator as defined in claim 2,
25 wherein the resilient lateral extensions are stamped out of said main body.
5. An electrochemical generator as defined in claim 4,
30 wherein the resilient lateral extensions are stamped out of said main body from both sides of said main body in an alternating pattern.

6. An electrochemical generator as defined in claim 1, wherein said spring plate is made of a steel or alloys thereof.

5 7. An electrochemical generator as defined in claim 1, wherein said apparatus for maintaining said stack of electrochemical cells in a state of compression further includes a pressure plate, said pressure plate being operative to cooperate with said spring
10 plate for applying pressure on said stack of electrochemical cells.

15 8. An electrochemical generator as defined in claim 7, wherein said pressure plate is positioned next to said stack of electrochemical cells and comprises a substantially flat surface adjacent said stack of electrochemical cells in order to provide a substantially uniform pressure distribution on said stack of electrochemical cells.

20 9. An electrochemical generator as defined in claim 8, further comprising a foam sheet located between said flat surface of said pressure plate and said stack of electrochemical cells.

25 10. An electrochemical generator as defined in claim 7, wherein said pressure plate comprises a series of receptacles adapted to anchor the ends of at least a subset of the resilient lateral extensions of
30 said spring plate.

11. An electrochemical generator as defined in claim 7,
wherein said apparatus for maintaining said stack
of electrochemical cells in a state of compression
further includes a rear plate, said spring plate
5 being positioned between said rear plate and said
pressure plate.

12. An electrochemical generator as defined in claim
11, wherein said rear plate comprises a series of
10 receptacles adapted to anchor the ends of at least
a subset of the resilient lateral extensions of
said spring plate.

13. An electrochemical generator as defined in claim 1,
15 wherein said apparatus for maintaining said stack
of electrochemical cells in a state of compression
is a first apparatus and is positioned adjacent one
extremity of said stack of electrochemical cells,
and wherein a second apparatus for maintaining said
20 stack of electrochemical cells in a state of
compression is positioned adjacent the other
extremity of said stack of electrochemical cells.

14. An electrochemical generator as defined in claim 1,
25 wherein said apparatus for maintaining said stack
of electrochemical cells in a state of compression
comprises a pair of superimposed spring plates
thereby increasing the total travel of said
apparatus.

15. An electrochemical generator as defined in claim
30 14, wherein the ends of the resilient lateral

extensions of said pair of superimposed spring plates are provided with mating patterns enabling the superimposed spring plates to be moored together.

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16. An apparatus for maintaining a stack of electrochemical cells in an electrochemical generator in a state of compression, said apparatus comprising:

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- a spring plate characterized by a series of resilient lateral extensions acting as springs;
- a pressure plate operative to cooperate with said spring plate for applying pressure on the stack of electrochemical cells.

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17. An apparatus as defined in claim 16, wherein said spring plate comprises a main body from which extends said series of resilient lateral extensions.

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18. An apparatus as defined in claim 17, wherein the resilient lateral extensions extend from both sides of said main body.

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19. An apparatus as defined in claim 17, wherein the resilient lateral extensions are stamped out of said main body.

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20. An apparatus as defined in claim 19, wherein the resilient lateral extensions are stamped out of said main body from both sides of said main body in an alternating pattern.

21. An apparatus as defined in claim 16, wherein said pressure plate is characterized by a substantially flat surface for providing a substantially uniform pressure distribution on the stack of electrochemical cells.

22. An apparatus as defined in claim 16, wherein said pressure plate is characterized by a series of receptacles adapted to anchor the ends of at least a subset of the resilient lateral extensions of said spring plate.

23. An apparatus as defined in claim 16, wherein said apparatus further includes a rear plate, said spring plate being positioned between said rear plate and said pressure plate.

24. An apparatus as defined in claim 23, wherein said rear plate is characterized by a series of receptacles adapted to anchor the ends of at least a subset of the resilient lateral extensions of said spring plate.